TEACHER'S GUIDE:

COMPANION TO

Bartholomew's Drawing-Book No. 4.

FOR TEACHERS AND STUDENTS USING BARTHOLOMEW'S DRAWING-BOOKS.

BY

W. N. BARTHOLOMEW,

PROFESSOR OF DRAWING IN THE ENGLISH HIGH AND BOSTON NORMAL SCHOOLS.

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INTRODUCTORY REMARKS.

With these lessons, we complete that part of the series designed especially to meet the wants of the masses. I am aware that there is but little about them that is attractive. The examples given, for the most part, are not such as the pupils would be likely to select; and perhaps they are not such as the teacher would have chosen, had the choice of subjects been left to him. In selecting our subjects, we have taken those which seemed to us best calculated to educate the eye and train the hand, and such as were well suited to illustrate those principles which lie at the foundation of correct drawing. We have aimed to *instruct* rather than to *amuse;* to furnish the means by which one may gain a *practical knowledge* of drawing. Of the many thousands who have attempted to learn the art, very few have succeeded in acquiring a useful knowledge of it. They meet with no great difficulty in learning to copy; but, when they have done this, they find themselves as powerless, on attempting to draw from objects, as they were when they commenced. This failure is sometimes charged to want of genius; but the real cause is the want of proper instruction. We state what we know, when we say that every one of

common intelligence may acquire a practical knowledge of drawing. Those who adopt the common method of teaching the art appear to assume that it is the hand that needs to be educated, and not the head. This is a mistake. Take care of the head (the controlling power), and the hand (the instrument through which it acts) will do all that is required of it. It is true that the hand needs a certain amount of training; but we are well satisfied, that, with those who practise drawing, the hand can be made to execute with as much exactness as the mind perceives. Suppose that one desires to draw the outline of any given object, and that he knows just how long each line should be, and the exact direction each line should have: is it not reasonable to suppose that the hand can be made to draw the lines? Many false strokes may be made before accuracy is secured; but, by repeated effort, the hand will do the work if the mind requires it.

On taking up an example, the teacher should give all the instruction that may be necessary to enable the class to draw the subject understandingly; and then, before a line is drawn, he should know, by the answers made to such questions as he may put to them, that they perfectly understand the instruction given. This is one of the conditions of success. Unless this plan is adopted, or one equivalent to it, the pupils may just as well draw with their eyes shut, so far as any real progress is concerned.

In a few of the early lessons in this book, we have given a series of questions, thinking that they may be of service to some in conducting this part of the exercise. In most

of the lessons, however, we have omitted to do this, for the reason that it is utterly impossible for any one to prepare a set of questions in advance, that will be just what is wanted in any given case.

Drawing from memory should be frequently practised. We have advised this in some of the earlier lessons of the series; but the great value of this exercise leads us to refer to it again. Where drawings are used to draw from, there is danger of being confined to them too closely. The pupil must be made to lay them aside occasionally, and rely upon the knowledge which he has acquired. This exercise is a step towards that point which one has gained who can draw any thing that he can see or imagine, without the slightest assistance from others. This point we hope the pupil may reach; but, to do it, he must occasionally be made to try his own strength. If the pupil has made any real progress, he will meet with some degree of success; and this will give him that courage which he needs when he attempts to draw from objects.

There is another advantage to be derived from this exercise. It strengthens that power by which we retain in the mind impressions of form. This power, in most minds, is exceedingly weak. No effort has been made to strengthen it. The pupils in our public schools are to be the mechanics of a few years hence; and, if they are to be any thing more than mere imitators of what others have produced, this power must be developed. New designs are always made of old ones. The imagination can produce nothing new unless memory furnishes her the means.

The pupils should be required to draw from objects, in connection with the examples. *This is indispensable.* After an example has been drawn, some object similar to that represented should be selected, and the pupils should be required to draw it. If this cannot in all cases be done in the schoolroom, let it be done at home; and let the drawings made be brought to school for criticism. With the help of the teacher, if any principle has been violated, the error may be discovered and corrected; and, when this has been done, the drawing should be copied into the book. These drawings may not contribute much to the good looks of the book, but no matter for that. A good-looking book is desirable, but the interest of the pupil must not be sacrificed to gain it.

In selecting the subjects represented in these lessons, we have taken forms, with few exceptions, such as every pupil is familiar with. Objects like them, or similar to them, are to be found in every dwelling; so that no one will have trouble in selecting a subject to draw from. By adopting the course recommended, the pupil will take the shortest and the easiest way in learning to draw from objects. After a little practice of this kind, he will find himself able to dispense with the help derived from the examples altogether.

The teacher should see that the pupils are provided with *good pencils.* This is a matter of great importance; as the success of the pupil depends, in a measure, upon the quality of the pencils he may use. It is absolutely impossible for any one to produce good work with a poor pencil; and hence a pencil of this kind in the hands of a beginner is a con-

stant source of discouragement. Drawings produced with an inferior pencil have a dirty, muddy look. A "cheap" pencil makes an uneven line, darker in some parts than in others; and then, again, owing to the unevenness of its temper, the same amount of pressure, in different cases, will produce different results; and for this reason it is impossible to make a clear, even shade with it. The pupil, in learning to draw, has obstacles enough to surmount, without increasing their number, as he certainly will if he is allowed to use poor pencils. Fortunately, it is a matter of economy to use good pencils. It is true that a pencil of inferior grade can be had for less money than one of the best quality; but the good pencil will last much longer than the poor one. The lead of a poor pencil is tender; and hence, in the process of sharpening, it is frequently broken: and then, in using it, it snaps off every now and then, even under a moderate pressure; and then, again, it must be frequently sharpened to get rid of some little particle of grit at the point, which scratches the paper in drawing. "Cheap" pencils are *dear* at any price. The "Eagle Pencil" generally used is *good;* but it is not the manufacturers' *best quality.* In the previous numbers we have advised its use because it would answer the purpose, and because it is less expensive than any other pencil of the same quality. It will answer for the work to be done in this number; but, where the pupils can afford it, I would recommend them to get the *best* quality of "Eagle Pencils." On all pencils of this grade, I have given the manufacturers permission to stamp my name. These pencils are unrivalled for toughness and

purity of lead, for brilliancy and richness of color, and for the exactness with which each pencil corresponds in hardness to the degree indicated by the sign used for this purpose.

The most convenient form of rubber is that known as the "Diamond Rubber." It is a great improvement on the old rectangular form. The angles being acute, there is nothing to prevent the operator from seeing just what he is doing when using it; and this makes it exceedingly valuable to the draughtsman.

RULES RELATING TO OUTLINE.

RULE 1. — Surfaces presenting a front view appear of their actual form.

RULE 2. — Lines presenting a front view appear in their actual position.

RULE 3. — Lines of equal length, presenting a front view, when seen at unequal distances, appear unequal, — the most distant appearing the shortest line.

RULE 4. — Parallel lines, receding from the observer, appear to approach each other as they recede; and, if sufficiently prolonged, they would appear to meet at the same point.

RULE 5. — Horizontal lines, receding from the observer, if above the eye, appear to incline downward as they recede; if below the eye, they appear to incline upward as they recede; and if on a level with the eye, they appear horizontal.

RULE 6. — Surfaces seen obliquely are fore-shortened; and the more obliquely they are seen, the more they are fore-shortened.

RULES RELATING TO LIGHT, SHADE, AND SHADOW.

RULE 1. — When a receding surface is in shade, the intensity of the shade diminishes as the surface recedes; when it is in light, the intensity of light diminishes as it recedes.

RULE 2. — The brightest light is never on the outline of the illuminated side of a cylinder, and the deepest shade is never on the outline of the side in shade.

RULE 3. — When an object casting a shadow, and the surface on which it falls, are equally dark, and in close proximity to each other, the shadow is darker than the shaded side of the object casting it. If the surface receiving the shadow is darker than the object casting it, the strength of the shadow is increased.

RULE 4. — The strength of a shadow diminishes in intensity as it recedes from the object casting it.

RULE 5. — The outline of a shadow is the most clearly defined at the point nearest the object casting the shadow; and it gradually becomes more obscure as it departs from this point.

RULE 6. — The outline of a shadow is modified by the form of the surface on which it falls.

INSTRUCTIONS

APPERTAINING TO THE EXAMPLES IN BOOK III.

LESSON I.

THIS lesson is intended as a review of Book 3. All of the rules given in that book relating to outline, or to light, shade, and shadow, are illustrated in the examples connected with this lesson. These examples, therefore, will give the teacher an opportunity to examine the class on all of the prominent points presented in that book. If the pupils are able to answer satisfactorily such questions as these examples are calculated to suggest, they will show themselves to be in possession of all the information necessary to enable them to take up the lessons which follows with profit. On page 20, we give a series of questions which may, perhaps, be of assistance to some in conducting the proposed examination.

The pupil has been instructed, when drawing from an object, to begin by making a figure whose shape shall correspond to the general form of the object. To illustrate what is meant by this, let us suppose the table represented in Ex. 2 of this lesson to be the object, and that it is seen

as there represented. In making the drawing, his first step should be to draw a figure like that given in Ex. 1. This figure represents the apparent width, height, and length of the table, as seen by him. With this drawing as a guide, it is an easy matter to make the outline of the different parts of the table within it. In the figure FABH, we have the apparent form of the upper surface of the board forming the top of the table; the points E, D, C, and J are guides in determining the points where the legs should terminate; and the lines FA and ED are aids in securing a correct drawing of all receding edges.

The advantage gained by first blocking-out the main form of an object, before attempting to outline any of its parts, must be obvious, even to those who are without experience; and it is hoped that the teacher will require his pupils to adopt this course when drawing from objects, as well as when drawing from a copy. We are led to make this suggestion, because our own experience has taught us that children, in their desire to reach a pleasing result, are often tempted to reject the only sure means they have of securing it.

Ex. 1. In drawing this figure, the lines should be drawn in the order indicated by the numerals. This is a matter of importance. If not understood, see Guide No. 3, Les. 2.

The lines in this figure, being for the most part guide-lines, should be made very faint, so that they may be easily erased when the end for which they are used has been secured. It will be understood, of course, that the

pupil, in making his drawing, is to omit both letters and numerals.

The page on which these examples are to be drawn will present the best appearance if Ex. 1 is placed in the centre of the left half of the page. Then, in drawing Ex. 2, let it be made within this outline. In case this course is adopted, the drawing to be placed on the right half of the page should be about the same size as that on the left; and it should occupy a corresponding place on the page. This drawing the pupil should make from some object. If nothing better can be found, let the pupils bring in a drawing of some table, of simple form, that they may find at home. These drawings may be corrected, and then copied in the book.

Ex. 2. In making the outline of the table within the drawing of Ex. 1, begin by making the lines which represent the thickness of the board forming the table-top. Next, draw that part of the table-leaf facing the observer, that is, the end of the leaf, the part in light; then draw what is seen of the part corresponding to this, at the farther end of the leaf; and then draw the lines representing the receding edges. In drawing the receding lines, be guided by AF and DE. Next, draw the front legs and that part of the frame connecting them; and finally draw what is seen of the legs at the farther end of the table. In drawing the table-leaf, care must be taken to make its thickness correspond to the thickness of the table-top.

Having secured an outline of the table, all lines in the

drawing corresponding to the dotted lines in the example should now be carefully erased.

If errors are made in outlining the table, they will, most likely, consist in giving to the lines representing the receding edges the wrong direction. There is no rule that beginners more frequently violate than that which relates to the appearance of parallel lines receding from the observer. The only way to correct this fault is to call their attention to the truths connected with these lines when they are drawing them. Practice will never correct the error, unless it is well-directed practice. It is a good plan to arrest the pupils in their work, every now and then, and require them to make a careful examination of what they have done, with the view of determining its correctness. By adopting this course, one is often able to detect errors that no amount of attention would have enabled him to discover at the time the errors were made; and this is especially true if that part of the work containing the error has been labored over for some time. Time spent in making these investigations is never lost. If errors are found, they may be corrected before it is too late to do so, without erasing a large part of the drawing; and, in addition to this, the disheartening effects of final failure are avoided: and, even though the work proves to be correct, the time has been well spent, for the eye and the mind are benefited by the exercise. When these investigations are being made, the teacher, making use of the drawing on the board, should point out the lines to be considered, one after another, and in this way make sure that each part of the

drawing receives attention. If this is done, it is quite likely that errors will be noticed that would otherwise be overlooked.

Before the pupils are allowed to add shade to their outline, the example should be studied, first, with the view of ascertaining the direction of the light. This is shown by the light and shade given to the drawing. The end of the table being left light, and the left side being shaded, indicates that the light came from a point on the right, and in front of the table; but its exact direction is more clearly shown by the shadows cast by the table-legs on the floor. In order to keep the drawing simple, the greater part of the shadow which the table cast on the floor has been omitted. Only enough of this shadow has been given to connect the table with the floor. Had the entire shadow been represented, it would have shown the height of the light; but this may be determined by the breadth of the shadow on the frame at the end of the table. The higher the point from which the light comes, the broader this shadow will be.

Having in mind the direction of the light, let the copy be examined with the view of determining the accuracy of its shades and shadows. If the pupil is sufficiently well informed to enable him to decide correctly whether the example is right or wrong in this particular, he may go on with his drawing, with a fair prospect of being benefited by the effort. If he cannot do this, and goes on with the work, he spends his time unprofitably. No true progress can be made by simply copying an example when one does

not *know* whether the example is *right* or *wrong*. To draw from a copy with profit, the pupil must use his brains as well as his hands.

It is because pupils are suffered to work like mere machines, without thought, never knowing why this or that should be as they find it in the copy, that so little real progress is made in this study. And, strange as it may seem, many sensible people attribute this lack of success to lack of genius, instead of its true cause, want of thought. Success is certain when the brains and hands work together; and defeat is equally sure, if the mind does not bear a part.

In the shading of this example, something more has been done than to express the simple fact that the light falls on this part of the object, and that that part is in shade. The material of which the thing is made is suggested; and this has been done by giving to all lines that are visible in the drawing a direction corresponding to the grain of the wood. In drawing these lines, it is not necessary that the pupil should make a literal copy of them: the important thing is to give them the right direction.

The light coming in on the right brings the left side of the table in shade. The table-leaf being a receding surface, the shade on this part would appear to diminish in intensity as the surface recedes from the observer. It will be seen that this rule has been observed in shading this part of the table. The lines forming this shade should not be as distinct as those on the table-top; for, the table-leaf being in shade, the grain of the wood would be more obscure than in the parts in light.

On the upper edge of the table-leaf, there was a shadow cast by the edge of the board forming the table-top. This shadow is represented by making the upper edge of the table-leaf darker than the adjoining edge of the table-top. "*When the object casting a shadow and the object on which it falls are equally dark, if in close proximity to each other, the shadow is darker than the shaded side of the object casting it.*"

The shadow cast by the top of the table on the table-frame has been made darker than the shade on the table-leaf, in accordance with the rule to which we have just referred. Observe that this shadow, where it meets the lower edge of the table-top, terminates abruptly, leaving a sharp and decided edge.

It is the clearness and sharpness of the line which separates this shadow from the table-top that causes the latter to appear to jut over the frame. Observe that the strength of this shadow gradually diminishes as it recedes from the top of the table. "*The strength of a shadow diminishes in intensity as it recedes from the object casting it.*" Notice the lower line in this shadow. That part of the line on the table-frame is lower than that on the legs. This is owing to the fact, that the frame sets back from the edge of the table-top a trifle farther than the legs. This matter should be made clear to the pupils by illustration. A moment's thought will lead one to see how books may be arranged for this purpose. It will be noticed that the line to which we have just referred is quite clear and sharp. The degree of decision found in the outline of a shadow, as

observation will show, depends upon the intensity of the light. The more vivid the light, the more decided the outline of the shadow. Hence, if we desire to express vivid light, the edges of the shadows must be clearly and sharply defined. One thing further, connected with this shadow, should be noticed; and that is the absence of all minor detail on that part of the object receiving the shadow. The grain of the wood is not seen here; and the upright edges of the drawer, and those in the table-legs, are not so clearly defined as in the parts in light. The correctness of the drawing in this particular should be verified by examining some object on which there is a strong shadow.

We have in the drawer-knob another illustration of the importance of shadows in expressing projection. There is nothing in the outline of this knob that causes it to appear to stand out from the face of the drawer. Its outline is simply a circle. In shading this knob, care should be taken to leave the line of reflected light seen on the side in shade.

In examining the light and shade on the table-legs, let us begin with those nearest the observer. It will be seen that the heaviest shade is near, but not on the outline of the left side of the legs, — the side turned from the light; and that this shade gradually melts away as it approaches the right side of the legs, leaving a line of light near, but not on the outline of, the right side. "*The brightest light is never on the illuminated side of a cylinder; and the darkest shade is never on the outline of the side in shade.*"

Of the back legs, the one on the right is the only one on which the direct rays of light fall; the one on the left being

shaded by the body of the table. This will account for the leg on the left being darker than the one on the right. It will be observed that the shade on these legs is not as heavy as that on the front legs. That there should be a difference in the strength of these shades will be apparent when it is remembered that any thing dark appears to be lighter as it is removed from the observer. This truth is expressed in Rule 1. These shades should not only be lighter than the shades on the front legs, but the lines forming them, if seen at all, should be more obscure than those on the front legs, owing to their greater distance from the observer. An additional reason why the back legs should be lighter, and the lines forming the shade less decided than in the front legs, is that they are the least interesting part of the object. A bold and decided expression in drawing, as in written or spoken language, always secures attention. This style of expression, then, should only be used in those parts of the drawing to which we desire to draw the eye.

The shadows cast by the table-legs on the floor are really parallel to each other; but, since they recede from the observer, they must, in theory, appear to approach each other as they recede. The degree of convergence, however, would scarcely be noticeable; for they are widely separated, very short, and recede but a trifle. The drawing of them will be sufficiently accurate if they are made parallel to each other.

QUESTIONS RELATING TO LESSON I.

When drawing from an object, what have you been instructed to do before attempting to outline any of its parts?

What is the advantage of this method over that of beginning at once with the detail of the object?

Is Ex. 1 in any way connected with Ex. 2? If so, what has it to do with that example?

What part of Ex. 1 corresponds to the end of the table nearest the observer? What part to the end most distant? What to that part of the floor immediately under the table? What part corresponds to the left side of the table? What part to the right side?

Name the lines in Ex. 1 in the order in which you have been instructed to draw them. Give the reason for the course recommended, and give the rule or rules which apply to the drawing of each line.

Do all of these lines form a part of the actual outline of the table?

What lines, and parts of lines, do form a part of the outline?

What is to be done with those lines that do not form a part of the outline, when the drawing is complete?

This being the case, should these lines be *very light*, or should they be as you see them in the example?

Are you to make the letters and numerals which you see in the example?

Does Ex. 2 represent the table as being on the right, or on the left, of the observer?

What is there about the drawing that leads you to think that the table must have been on the right of the observer?

Was the top of the table above or below the eye?

What leads you to believe that it was below the level of the eye?

Was the distance of the table on the right of the observer greater or less than its distance below the eye?

What is there about the drawing that shows conclusively that the distance of the table on the right of the observer was greater than its distance below the eye?

Which is fore-shortened the most, — the top of the table, or the table-leaf?

Which of these surfaces was seen the most obliquely?

Did the observer have a front view of any part of the table? And, if so, what part?

What reason have you for thinking that he had a front view of the end of the table?

What relation do all of the receding lines in the table bear to each other?

Do we draw things as they are, or as they appear?

Did these receding lines appear to the observer to be parallel to each other?

How did they appear to him?

State the rule which describes the appearance of receding parallel lines.

Have you ever noticed that you violate this rule, in making your drawings, more frequently than any other?

In drawing the outline of the table, state definitely where you are to begin, and how you are to proceed.

What should be the thickness of the table-leaf compared with that of the table-top?

In drawing the table-leaf, what relation must the line representing the lower edge bear to the line AF?

Must this line approach the line DE, as it recedes, as well as the line AF?

In drawing the lower edge of the table-leaf, then, what two lines should be kept in mind to guide you in giving it the right direction?

In drawing the table-legs, are they all to be of the same diameter?

How should those at the farther end of the table compare with those at the end nearest the observer?

Does the dark tint on the table-leaf represent shade, or shadow?

Does the dark tint on the end of the table, just under the table-top, represent shade, or shadow?

Does the tint on the floor, at the bottom of the table-legs, represent shade, or shadow?

Is it possible to determine the direction of the light by the shades and shadows in the drawing?

Do they indicate that the light came in on the right, or on the left, of the table?

Had the light come in on the left, instead of the right, would there have been a shade on the table-leaf?

Suppose you were to shade your drawing as though the light came in on the left, instead of the right: would you, in this case, make the table-leaf dark, or would you leave it light?

Did the light come from a point in front of the table, or from a point behind it?

Had the light come from a point behind the table, would the end nearest the observer have been in light, or in shade?

What, in this case, would have been the direction of the shadows on the floor?

Does the shadow at the end of the table give you an idea of the height of the point from which the light came?

Had this point been at a greater elevation than it was, would this shadow have been narrower, or broader, than it is in the drawing?

Place a book on your desk, to represent the table, and hold your pencil so that it shall indicate the direction of the light, as represented by the shades and shadows in the drawing.

Examine the drawing, and tell me whether the shade on the table-leaf is even, or graduated.

Was not this shade perfectly even in the table?

Why, then, should it be a graduated shade in the drawing?

Do parts of all receding surfaces in shade appear lighter in proportion to their distance from the observer?

Give the rule in which this general truth is expressed.

What is the cause of this apparent change in the intensity of the shade?

Does the grain of the wood in a table-leaf run lengthway of the leaf, or in the opposite direction?

Do the lines forming the shade in this part of the drawing correspond, in direction, to the grain of the wood?

Do these lines represent the grain of the wood, as well as the shade?

Would this have been the case if the lines had been drawn in the opposite direction?

Then, in shading a drawing, where the object represented is made of wood, what should govern us in giving direction to the lines forming the shade?

Are the minor details of an object seen as clearly and distinctly when in shade as they are when moderately illuminated?

Then, in shading the table-leaf, should the lines left visible be as distinct as those on the top and end of the table?

Is the drawing correct in this particular?

Do the lights and shadows separate gradually, or abruptly, on objects bounded by planes?

Has the shade on the table-leaf been made to terminate abruptly where it meets the illuminated surface at the end of the leaf?

I notice that the upper edge of the table-leaf is darker than the adjoining edge of the table-top. If this is correct, how do you account for it?

Give the rule which relates to the comparative strength of shades and shadows.

What should be the strength of the shade at the end of the table, just under the table-top, as compared with the shaded side of the table-leaf?

Is there any thing in the outline of the table that causes the table-top to appear to jut over the frame at the end of the table?

What, then, is the cause of this effect?

Had the upper edge of this shadow been less decided than

it is, would the apparent projection of the top have been as perfect as it now is?

In shading a drawing, then, when the appearance of projection depends entirely upon shadow, what is the important thing to be observed?

Are all parts of this shadow equally dark?

What part is the darkest?

Are all shadows the darkest at that part nearest the object casting them?

What part of this shadow is the lightest?

Is the gradation of this shadow regular?

Are all of the truths noticed in this shadow *general truths?*

Give the rule which expresses the truths illustrated in this shadow.

What does the sharpness of the lower line in this shadow, in the table itself, depend upon?

Then, in case we wish to represent strong light, what kind of an outline should we give to our shadows?

I observe that the lower edge of this shadow is not perfectly straight. The shadow is deeper on the table-frame than it is on the table-legs. Why is this?

I notice that there are lines on the illuminated part of the table-frame, representing the grain of the wood; but I do not see any in the shadow. Why have they been omitted there?

If you will look at the drawer-knob, you will see that its outline is simply a circle. Now, a circle is a plane figure; but this knob appears to have thickness, and the head of

the knob looks as though it stood out from the face of the drawer. How has this effect been produced?

Where do you find the brightest lights and the darkest shades on cylindrical forms?

Give the rule which relates to light and shade on cylindrical objects.

Do the lights and shades on forms of this kind separate gradually, or abruptly?

Is the shade on the table-legs correct?

I observe that the leg on the left, at the farther end of the table, is darker than its mate. How is this to be accounted for?

I find that the shade on both of the back legs is a little lighter than that on the front legs, and that the lines composing the shade are more obscure than those forming the shade on the front legs. Is this simply an accident? If not, explain why this difference should exist.

Is the entire shadow which the table cast on the floor given in the drawing?

What has been said in regard to the relation which the shadows at the foot of the table-legs should bear to each other?

Give the rules involved in the drawing of these shadows, and point out their application.

LESSON II.

The example given in this lesson furnishes the pupil with a very pleasing model, and at the same time a very useful one. Hitherto, the objects represented have been composed

of hard and rigid material; but in this we have a material that is soft and flexible. In making a drawing for pictorial purposes, it is essential that the qualities natural to the object should be expressed; indeed, this is even more important than that its exact form be described. Suppose, that, in making this drawing, we had represented the seat of the chair as being a little lower, or the back a little higher, than strict fidelity to truth required, the drawing would not have been a failure; but had we made these parts to appear as hard as a rock, rather than of the softness of wool, the case would have been different. In drawing the form of the chair, we simply copied what we saw, making line for line; but in giving expression to its surface, and in making the seat and back to look soft and flexible, we were guided by our knowledge of lines, and how to use them to produce the desired effect. There were no lines in the chair to imitate, as in making the outline. In judging of the merits of this part of the drawing, it would be useless to compare it with the object; for there is nothing there to justify or condemn it. Its merits must be determined by the impression which it conveys to the mind. The fact that the parts look as though they would readily yield to pressure shows the drawing to be correct in this particular. Had it failed to convey this impression, it would have been wrong.

A close examination of this drawing will show that its outline is very light and delicate, and that the lines used in making the shades and shadows are indistinct at their extremities and along their edges. Had we used a sharp

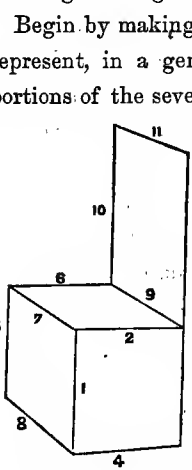
and wiry line in making the outline, and in making the shades and shadows, we should have failed altogether in expressing the character of the surface, and the soft and yielding nature of the material.

It is important that the class be made acquainted with the facts to which we have referred, before they attempt to draw the example. It will not do to assume that the pupils will, in making the drawing, discover these facts themselves. If left to go on without instruction, the chances are, that not one pupil in the class will be able to tell why it is that his drawing fails to express the truths connected with the chair as clearly and as forcibly as they are expressed in the example; or, suppose that it were possible for them to succeed in making a perfect imitation of the example, not one of them could give a reason for his success. He might say that it was because of his perfect imitation of the example; but this would be no reason at all. One may copy perfectly, and yet learn nothing that will be of service to him when he attempts to draw from objects. Exact copying is no evidence of knowledge. It only shows that the eye and the hand have made good progress. The pupil who thoroughly understands what he is doing, and why he does it, who knows the use and purpose of all he finds in his copy, even though he may execute but indifferently well, is the one who is making *real progress*. Put him to drawing from an object, and he will make a far better drawing than the boy who copies his examples perfectly, and yet is ignorant of all that it was necessary to know in order to produce the original. Never allow the class to begin the

drawing of an example until you have done for them all that it would be possible for you to do were they about to engage in drawing from the object itself; and then, before they commence drawing, give them to understand that they must aim to *imitate* the example, and not to *copy* it. By this we mean, that, in expressing a given truth, they are to use the same means that are employed in the example; but they are not to copy it line for line. Let them adopt this course, and they will soon come to depend less and less upon their copy, and more and more upon themselves, until, at length, they find themselves possessed of the power which enables one to draw without the aid of copies.

In pointing out the proper course to pursue in drawing this example, we simply state the course we pursued in drawing the original.

Begin by making a figure of straight lines, which shall represent, in a general way, the apparent form and proportions of the several parts of the chair. In doing this, we get a figure similar to the one here given. The numerals indicate the order in which the lines should be drawn. This figure serves as a guide in drawing the true outline of the chair. The next step is to secure an exact outline of its principal parts. When this has been done, erase the guide-lines, add the minor details, and, last of all, the shade.



Notice how clearly the undulating surface of the back of

the chair is expressed. This is done by making certain parts of the shade lighter than other parts. The light shades represent strong reflected light. Those parts of the surface which are so situated as to receive the rays reflected from the seat of the chair, at the greatest angle, are illuminated the most. This, also, explains why the shade on the upper part of the back is made darker than that near the seat of the chair.

From the lines which have been left visible in the shade on the back of the chair, it will be seen that this shade has been produced by the most careful succession of lines; each line curving so as to correspond to the curvature of the part of the surface over which it passes. This shade is not produced by one series of lines, but by many, all of which cross each other at a very acute angle. The shade given to the flounce on the front side of the chair is produced in the same way as that on the back of the chair. In making the light tints on the flounce on the illuminated side of the chair, great care must be taken, or the pupils will make them too dark. In making all these shades, a pencil with a round but not very dull point should be used; and, as we have before remarked, every line used in making these shades must be faint at its extremities, and indistinct along its edges. This kind of line is indispensable in expressing the truths connected with those parts of the chair to which we have referred.

It is often difficult, and sometimes it is quite impossible, to represent a surface accurately without the assistance afforded by a shadow. Notice the shadow cast by the back

of the chair on the seat. It is the curve given to the outline of this shade which shows the surface of the seat to be depressed in the centre. Make this line straight, and the seat will appear to be a plane; curve it in the opposite direction, and the surface will appear convex. From this it will be seen that the expression of this particular fact relating to this surface is dependent entirely upon the form given to this part of the shadow. This will afford a good opportunity of calling the attention of the class to the value of shadows in expressing the form of the surface on which they fall, and to the importance of making a careful drawing of them.

Notice the outline of the shadow on the floor on the illuminated side of the chair. The curves in this line aid materially in expressing the loose and wavy surface of the flounce.

After the pupils have made their drawing from the example, they should be required to make a second drawing from *memory*. If it is understood, at the start, that this is to be required of them, perhaps some of the careless ones will be more careful in their study of the example, and more thoughtful in the drawing of it, than they would if this was not understood at the beginning.

QUESTIONS FOR EXAMINATION.

How was this chair situated with regard to the observer?

In drawing this chair, what kind of an outline should be made, preparatory to drawing the true outline?

In what order should the lines be made in drawing this figure? *

Give the rule, or rules, which apply to the drawing of each line in this figure.

Having drawn this figure, where would you begin, and how would you proceed, in drawing the true outline of the chair?

Should the outline be light and delicate, or sharp and wiry?

Why should it be light and delicate, rather than sharp and wiry?

From what point is the light supposed to come in this picture?

What is there to show that the light came from a point in front, and on the right, of the chair?

Describe the *kind* of line used in forming the shades and shadows.

Are these lines straight, or curved?

How are these shades produced?

Is the shade on the back of the chair of the same strength throughout?

What parts are the lightest? and what parts are the darkest?

How do you account for some parts of the shade being lighter than other parts?

Why should the upper part of the back be darker than the lower part?

* The teacher should have a drawing like that given on page 21, on the board, properly lettered.

Does the drawing represent the centre of the seat of the chair as being depressed?

How is this expressed?

Had this outline of the shadow been a straight line, what effect would it have had upon the appearance of the seat?

Had this line curved upward, instead of downward, what effect would it have had upon the appearance of the seat?

Since the form of a shadow has so much to do in explaining the surface on which it falls, ought we not to be quite as careful in drawing them when they fall on the object we are representing as we are in drawing the form of the object itself?

Give the rules relating to shadows, and your opinion as to whether those rules have been observed in shading this drawing.

I notice that the outline of the shadow on the floor, on the illuminated side of the chair, is curved considerably in places. Can you explain this?

In shading this drawing, should the point of the pencil be round or flat?

LESSON III.

The examples given in this lesson represent objects where surfaces differ from each other, in some respects, very materially.

The tin cup represented in Ex. 1 has a bright and shining surface, while that of the iron pan pictured in Ex. 2 is dull, dead, and lustreless. Now, the value of these drawings, aside from the accuracy of their outline, depends upon

our success in expressing these truths. The means which have been used in giving to each surface its true character should be carefully studied and thoughtfully imitated; so that the pupil, when he has occasion to describe similar surfaces without the aid of a copy, will have some idea of the proper means to use. The earlier this occasion occurs after the drawing of each example, the better.

It is hoped that the teacher will require each pupil to make one or more drawings from objects, for every drawing he may make from the examples given in the copy-book. The objects selected should be, in character, similar to the examples. After the cup in this lesson has been drawn, let the pupils bring in a drawing of a long-handled dipper, coffee-pot, tin can, or some article of tinware such as every kitchen closet affords. In copying these drawings in the books, they should be of such size, and occupy such a place on the page, as to be in harmony with the drawings made from the examples. This is necessary for the good appearance of the books.

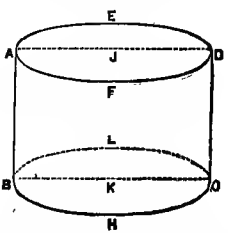
Ex. 1. In pointing out the proper course to pursue in drawing this example, I describe the course adopted in making the original drawing of the cup.

First, consider the depth of the cup, as compared with its diameter. Having determined this, draw a figure similar to ABCD in the accompanying drawing. The upright sides of this figure represent the outline on the left and right of the cup, and the horizontal sides serve as a guide in drawing the rim and the bottom. In making this

figure, two prominent points in the outline of the rim and in the outline of the bottom of the cup are secured. It is desirable, however, before drawing the curved lines which are to represent these parts, to secure other points in their outline. Beginning with the rim, consider the apparent height of the point E, on this line, over F, as compared with the distance between the points A and D. The apparent distance between these points, in this case, is found to be equal to one-third of AD.

Bearing in mind that the half AFD of the circle is nearer than the half AED, place the points E and F so that

FIG. 1.



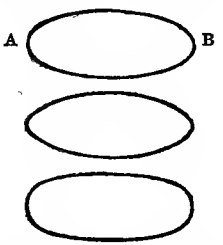
the distance from J to E shall be a little less than the distance of F from J, and so that EF will equal one-third of AD. Having now secured the four points A, F, D, and E, which represent the four prominent points in the outline of the rim, draw the curved line AFDE through these points. Next, consider the proper place on the paper for the point H, in the outline of the bottom. In placing this point, we depend upon what we know, rather than upon sight. We know that the distance from the rim to the bottom of the cup is everywhere the same; and we also know that the

part FH of the cup, is nearer the observer than the parts AB and DC, and that, therefore, the distance from F to H appears a trifle greater than the measure of AB or DC. In placing H, however, we should use JF as a measure, rather than AB or DC, because this is the shortest measure of the two, and it gives us the same result. By making KH a trifle greater than JF, we make FH a trifle greater than AB. Having placed the point H, get a point in the outline of the bottom corresponding to L. By drawing the entire outline of the bottom, we are far more likely to make an accurate drawing of the part seen than would be the case if we drew this part alone. Although this point is not visible in the object, we know that its distance from K will be a trifle less than the distance from K to H. We apply the same reasoning here that we used in placing the point E in the rim.

Having secured the four prominent points in the outline of the bottom of the cup, draw through them the curved line BHCL, making the part BLC so light that a touch of the rubber will erase it; next erase the guide-lines, together with the curved line BLC, and then draw the detail, commencing with the rim and ending with the handle. In drawing the handle, begin with the edge nearest the observer.

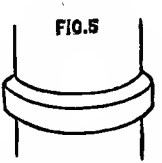
In instructing the class how to draw the cup, the teacher should be provided with a cup similar to the one represented. It will be of service when speaking of the outline; and also when the pupils come to add shade to their drawings.

It may be well to notice here some of the errors that are made in drawing a circle seen obliquely. It is a common error to make the parts corresponding to A and B, in Fig. 2, sharp and pointed, as shown in Fig. 3. In endeavoring to avoid this error, some will go to the opposite extreme, and draw the figure as represented in Fig. 4. It is not a very



easy thing to make an accurate drawing of a circle as it appears when viewed obliquely, even when its exact form is well understood; but, if there is a failure here, the drawing is sure to be wrong.

Special attention should be called to the drawing of the

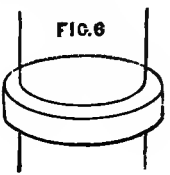


projecting edge at the bottom of the cup. This edge forms a ring which extends entirely around the cup. It is not an uncommon thing to find forms like this incorrectly drawn, even by those who have had experience. The error most frequently made is shown in Fig. 5. It will be observed

that the projection is represented in this drawing as extending only half way round the cylinder. In Fig. 6, the drawing is correct. We have increased the size of the projection in these figures, in order to make the difference between that which is true and that which is false very apparent.

In this example, some of the highest lights in the drawing are in that part which represents the surface as turned from the light. It is only on a polished surface that an effect of this kind is ever seen. Another fact to be noticed on surfaces of this kind is the suddenness with which some of the lights and shades separate.

FIG. 6



In shading the outline of the cup, the body of the shade should be made with vertical lines; and these lines should be so near to each other that there will be no visible space between them. To get this result, it will be necessary to go over the shade a number of times, evening it and graduating it as the case requires. When this has been done, the curved lines which lie parallel to the rim and bottom of the cup should be added. These lines assist in giving character to the surface. All of them should be fine and sharp, except at their extremities: here they should be soft and light. In shading the inner surface of the cup, great care should be taken to keep the outline of that part of the

rim on the nearest side of the cup clear and sharp. The appearance of projection in this part of the drawing depends, in a great measure, upon the clearness and decision given to this line.

QUESTIONS RELATING TO EXAMPLE I.

In preparing these questions, it is assumed that a drawing of the cup has been placed on the board, and that the prominent points are marked by letters corresponding to those connected with the figure given in this book.

In drawing from a cup, or from any object of similar form, what is the first thing to be considered?

Having determined the height of the cup, as compared with the distance across the rim, what should be done?

The lines AB and DC form a part of the outline; but this is not the case with AD and DC: what is the use of these lines?

In completing the outline of the cup, where would you begin?

Would you complete the entire outline of the rim before proceeding farther? or would you simply draw a single line to represent the circle which it forms?

[It might not matter much, in this particular case, if one should draw the entire outline of each part before blocking out the main form of all: but this is a bad habit to form; for, in very many cases, particularly when the subject is complicated, it not unfrequently happens that one is obliged to erase a large part of what has been done, in consequence of some error committed in the early part of the work; and, when this is the case, all the time spent in drawing the detail is lost, the discouragement is greater than when

but few lines have been drawn, and the paper on which the drawing is made is injured more in removing the lines. It is important that it should become a *habit* with the pupil to get the general outline of the subject he is drawing before touching the detail. To form this habit, he must in all cases, while under the direction of his teacher, be made to adopt this course.]

We have already two points, A and D, in the outline of the rim. Is it desirable to establish any other points in the line before drawing it?

What points?

Taking AB as a measure, what is the height of E above F, in the drawing?

In placing the points F and E, should they be placed equally distant from J, the middle point in the line AB?

Should E, or F, be at the greatest distance from J?

Why should F be farther from J than E?

In drawing the curved line through these points, have you any reason to believe that you can do it without making any false strokes?

What, then, should be the character of each stroke made in producing this line?

May we use a false line as a guide in making one that is correct?

In drawing this line, then, will it be advisable to erase each false stroke of the pencil as soon as it is made?

Having drawn the line AEDF, what part of the cup should be drawn next?

In outlining the bottom of the cup, have you been instructed to draw the entire outline of this part, or simply that part represented in the example?

What reason was given why you should draw the entire outline of the circle formed by the bottom?

In drawing this line, will it be advisable to place points corresponding to F and E in the rim?

In the cup, the distance from F to H is equal to AB: should these distances be equal in the drawing? and, if not, which should be the greater?

Why should FH be greater than AB?

The distance from F to H, in the example, is about one-eighth of an inch greater than the distance from A to B. Suppose you were to take JF as a measure, instead of AB, and place H one-eighth of an inch farther from K than F is from J: will the distance from F to H be one-eighth of an inch greater than the distance from A to B?

In placing the point H, then, JF or AB may be used as a measure. Which of the two will be likely to insure the greater accuracy?

Why are you more certain of accuracy by using JF rather than AB?

What should be the distance from K to L, compared with the distance from K to H?

Having drawn the outline of the bottom of the cup, what should be drawn next?

In drawing the handle, what part should be drawn first? and what next?

In adding the detail, where would you commence? and how would you proceed?

In shading the drawing, in what direction should the lines forming the body of the shade be drawn?

In what direction should all other lines on the outer surface be drawn?

In what direction should the finishing lines on the inner surface be drawn?

Are the lines forming the body of the shade more, or less, distinct than those used in finishing?

What is the character of the lines used in finishing the shade?

From what direction does the light come in this example?

If the light comes in on the right, how do you account for those bright lights on the parts turned from the light?

Have you ever noticed the effect here represented on polished surfaces?

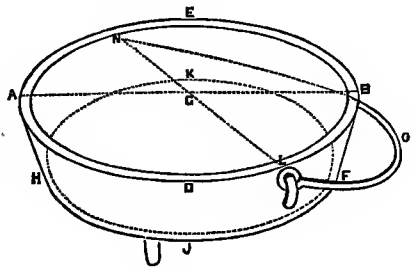
Did you ever see any thing of the kind on an unpolished surface?

In representing a polished surface, then, is it not important to pay particular attention to these lights?

In producing the shadow cast by the cup, in what direction should the lines be drawn?

Ex. 2. In drawing from an object like the one here represented, first get an outline of the rim. To secure the four prominent points in its outline, proceed as follows: Draw a straight line, as AB in the accompanying figure, and let this line represent the distance across the rim at the points A and B. The extremities of the line will represent these points. Next, consider the apparent height of E, the highest point in the farther side of the rim, above D, the lowest point in the nearest side, as compared with the distance between the points A and B; and place these points

so that the distance from E to AB shall be a little less than the distance of D from this line. In the instruction relating to the rim of the cup, in Ex. 1 of this lesson, we explained why these points should be placed as here directed. Having located these points, draw the curved line AEBD, and then the inner line of the rim. In drawing this line, bear in mind that it cannot appear to be parallel to the outer edge. The apparent distance between these lines at A and B will be greater than the apparent



distance between them at D; and the distance between them at D will appear greater than at E: for a line measuring the distance between the lines at A and B would present a front view, whereas a line at D or E would be seen obliquely; and the distance between the lines at D would appear less than at E, because E is farther in the distance than D. Next, consider the slope of the sides at AH and BF, and draw these lines. These lines may be drawn without any special care as to their exact length, only let them be long enough. The depth of the pan

should be considered next, and the points J and K, in the outline of the bottom, placed. The distance of J below the point D, in the rim, should be greater than the distance between the corresponding points, K and E, on the farther side of the pan, for the reason that the part DJ is nearer than the part EK. It is true that the flare of the sides of the pan would tend to lessen, apparently, the distance between the points D and J, and lengthen that between E and K; but it must be remembered that the distance from E to K is less than that from D to J, by so much as the thickness of the bottom of the pan; and that the actual difference in the length of these lines will make up for the apparent shortening of one and lengthening of the other. Having placed the points J and K, draw the outline of the bottom of the pan, using the outline of the rim, and the lines AH and BF, as a guide. In drawing the bottom, bear in mind that the figure to be represented is a circle, and that its outline is in reality parallel to the rim. The space left between the dotted line and the points H, J, and F, represents the thickness of the sides of the pan. This line should be made very light, as a large part of it is to be erased. The object in drawing the entire outline of the bottom is the same as that which led us to draw the entire outline of the bottom of the cup in Ex. 1. It insures accuracy in the part seen. The outline of the leg and the bail may now be drawn.

The bail would be quite a difficult part to outline accurately if only the part seen were drawn. In all cases of this kind, it is always best to draw the part entire. It not

only insures greater accuracy, but it is the quickest way of reaching the end, if accuracy is desirable. Before attempting to draw the bail, locate the three prominent points in its outline. Consider first the proper place for the end L, and there place a point. Then through C, the middle point of AB, draw a line from L to meet the outline of the rim. This will give N, a point on the sides of the pan directly opposite to L. The end of the handle, on the farther side, must be at this point. In placing the point O, the middle of the handle, observe what point in the side BF it appears to be on a level with, and how far it seems to be on the right of this point; and then, having determined this, place the point as judgment dictates. A single line should be used in getting the sweep of the bail; and, when the exact curve has been secured, the outline of the part seen may be easily made.

In outlining a subject like this, accuracy is indispensable; and since it is impossible for any one, no matter how skilful he may be, to draw the outline without making some false strokes, it is very important that each line should be very light; and by this we mean just dark enough to be clearly seen. To secure this, the teacher must insist that it shall be done. Beginners almost invariably make their lines too heavy. Their fingers are not keenly sensitive to touch. This sense must be cultivated. When a correct outline has been secured, the guide-lines, and all lines incorrectly drawn, should be erased, and the true outline strengthened where the case requires it. It should be remembered, in strengthening these lines, that, on the parts to be shaded, the lines must not be dark

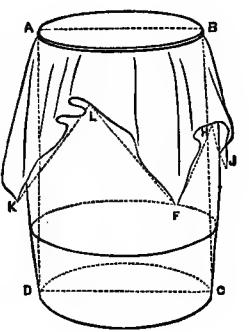
enough to be visible as distinct lines when the shade is added.

Before shading, the attention of the class should be directed to the truths connected with light and shade on cylindrical forms, and to those connected with shade and shadow. In calling attention to the outline of the shade, and to the form of the shadow on the inner surface of the box, the teacher should use some shallow box of cylindrical form, to show the truthfulness of the example.

LESSON IV.

The class of subjects we are now placing before the pupil are really quite difficult to draw. They require close study and careful drawing, or they will appear badly. In each example, there are several circles seen in perspective. This figure is one of the most difficult forms we have to represent; but it furnishes splendid practice for eye and hand. The attention that one must give in order to see the truths connected with this figure, and the thought and care that must be bestowed upon the drawing in order to express them correctly, will do more towards educating the eye and training the hand than the drawing of any number of examples of the kind usually given to beginners. Old ruins, dilapidated buildings, and stumps of trees, make very pretty pictures to look at; but they are the very worst kind of subjects to put into the hands of one who is learning to draw. They do not demand *accurate drawing;* one may vary from the subject in every line without in the least affecting the

good looks of the picture. This leads to the habit of drawing *carelessly*. Many a professional draughtsman, whose early practice was largely confined to subjects of this kind, is now, after years of practice, utterly unable to draw any thing accurately. What the pupil needs most of all to make him a good draughtsman, or a good workman if he is to be a mechanic, is an eye and a hand trained to make nice distinctions: and the examples we are giving him for



study and practice are of a kind best calculated to secure this end; for they demand close study and careful drawing.

In drawing the example given in this lesson, or in drawing from an object like the one represented, first determine its height, as compared with the diameter of the head, or cover, and then draw a figure similar to the rectangle ABCD. Having made this figure, draw the elliptical forms which represent the general outline of the cover and the bottom of the barrel. In drawing these forms, proceed as

instructed in outlining the rim and bottom of the cup in Ex. 1, Les. 3. Next, consider the curve in the lines corresponding to ADK and BJC in the figure, and, guided by the straight lines AD and BC, draw the outline of the sides of the barrel. Observe that these lines are comparatively straight at their extremities, the sharpest curve being at the middle. In drawing them, pay no regard to the cloth, or to the hoops, which hide certain parts from view: draw the lines as though those things were not there. By adopting this course, one is more likely to draw correctly the parts seen than he would if he were to draw only such parts as are visible. This done, complete the outline of the cover; in drawing the handle of which, be careful to place it so that the middle of the handle shall be exactly over the middle point in the long diameter of the ellipse representing the upper surface of the cover. Draw the cloth next. In getting the outline of the cloth, first place points corresponding to K, E, F, H, and J, to mark the principal points in its outline, and connect them by straight lines, as shown in the figure; and then, guided by these lines, carefully draw its exact outline. The hoops may be drawn next. In drawing them, keep in mind the fact that each hoop, if its entire outline could be seen, would appear elliptical in form, and that one-half of each hoop is seen. When the hoops have been drawn, make the lines formed by the joints between the staves.

The most flagrant errors likely to be made in drawing this example will be in the drawing of the hoops, particularly at those points near which they pass out of sight in

going round the barrel. The attention of the class should be especially directed to their form at these points. Another matter to be noticed is the apparent relation which the different sets of hoops bear to each other. They are really parallel to each other in the barrel, but they do not appear to be parallel. The distance between the parts nearest the observer appears to be a trifle greater than between the parts more remote.

In adding shade to the outline, begin at the upper part of the drawing, and work downwards. In shading the cloth, call to mind the instruction given in regard to shading the drawing of the chair in Les. 2. The lines used must be delicate, their edges soft, and their extremities faint; and the direction of each line should correspond to the direction of that part of the surface on which the line is drawn. In shading the staves, the body of the shade may be made with vertical lines; but the finishing strokes on each stave should run parallel to that part of the hoops crossing the stave. In shading this part of the drawing, notice the reflected light on the edge of each stave on the shaded side of the barrel. In shading the hoops, draw the lines parallel to the outline. Observe the shadow just under the hoops near the bottom of the barrel. The appearance of projection given to this set of hoops depends upon this shadow. In adding the shadow cast on the barrel by the cloth, make the lower outline, near the point F, in the figure here given, sharp and decided, and from this point let the line gradually become indistinct, until it is lost in the shade. In shading, great care should be taken to preserve a clear and distinct edge

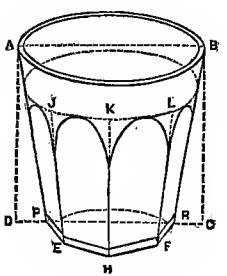
to the lower outline of the cloth. If this is not sharp and clear, the cloth will not appear to stand out from the barrel. The surface on which the barrel rests being horizontal, the lines forming the shadow should be horizontal.

LESSON V.

In selecting a subject for this lesson which shall give the pupil further practice in drawing circular forms, we have chosen a common glass tumbler, because it affords us an opportunity of showing how transparency may be expressed by means of the pencil. The tumbler is represented as being filled nearly to the brim with water, and on a white ground. If the pupils can have an opportunity of observing how a tumbler looks when seen under these circumstances, before they attempt to draw the example, or at least before they undertake to add shade to their outline, the lesson will be of more service to them than will be the case if they are left to get both the facts to be expressed and the means of expressing them from the example alone.

In drawing from this example, or in case the pupil were to draw from the tumbler itself, he should proceed as follows: He should consider, first, the height of the tumbler, as compared with its diameter at the rim; and, having decided this, a figure should be drawn similar to ABCD in the accompanying figure. In this case, the distance across the top of the tumbler was just equal its height. The sides of this figure will be of great assistance in getting a correct outline of the object. AB is used in drawing the rim; AD

and BC, in giving to the sides AP and BR their proper slope; and DC is of service in drawing the bottom. Having drawn the figure ABCD as a guide, commence the outline of the tumbler by drawing the outer edge of the rim. In drawing this, proceed as suggested by the drawing of the rim of the cup and pan in Les. 4. The inclination of the sides of the tumbler should be considered next; and, in doing this, compare them with lines corresponding to AD and BC. Observe the angle they make with these lines, and, having determined this, draw the lines, guided by AD



and BC. Preparatory to drawing the lines in the lower part of the tumbler, draw a guide-line corresponding to JKL. A line like this on the tumbler would pass through the highest points in the curved lines just below the rim, and it would be parallel to the rim. In the drawing, for obvious reasons, this line should slightly approach the outline of the rim. Having drawn this line, consider the apparent width of the surfaces corresponding to that lying between the lines JE and KH, and draw the guide-lines JE, KH, and LF, beginning with KH.

We would draw KH before JE or LF, because the distances from this line to the sides of the tumbler are more nearly equal than is the case with either of the other lines mentioned. In drawing these lines, no special effort need be made to have them terminate exactly at the points E, H, and F: all that is necessary is to have them sufficiently long to contain these points. The proper place for the point H should be considered next. Observe how far it seems to be below the points P and R, and place the point as judgment dictates. The points E and F should be considered next; and, in placing them, be guided by P, R, and H. The outline of the bottom should now be drawn. Enough has now been done to enable one to decide as to the general accuracy of the drawing. Before going farther, it should be carefully examined; and, if found to be wrong in any particular, the error should be corrected. In completing the outline, draw first the inner edge of the rim. Then take up the several parts in regular order, working from the rim downwards, erasing the guide-lines when the outline is complete. In case any part of the outline has been made too decided, it should be weakened with the rubber, before shading is commenced.

It will be observed that the shade, for the most part, is exceedingly delicate, and that the lines composing it are drawn so near to each other that it is, in many cases, difficult to determine their direction. This delicacy of tint, and this compactness of the lines used in producing it, is necessary in representing the character of the surface and the transparency of the material. In all cases where the direc-

tion of the lines is not apparent, give the lines in the drawing the direction of the surface, being careful to have the same obscurity connected with the shade, when completed, that is found in the example. The lines used should be faint at their extremities and feathery along their sides. In producing most of the shades, it will be necessary to work them up very carefully, with a fine point, after the body of the shade has been made.

The shadow cast by the tumbler should receive special attention. The tumbler being transparent, the light passes through it, and this makes the shadow much lighter than it would be if the tumbler were opaque; and then, again, owing to the form of the tumbler, the light in passing through it is obstructed in some parts more than in others, and hence the shadow is uneven, some parts being quite light, and others comparatively dark: giving it a cloudy appearance. In drawing an object of this kind, it is very important that its shadow should be accurately represented, as it aids materially in expressing the idea of transparency.

LESSON VI.

Ex. 1. The object represented in this example is called a *sphere*. A sphere is a solid bounded by a curved surface, every point of which is equally distant from an interior point called the centre.

The outline of a sphere seen from any point is always a circle; and, were it not for the difference which exists between the sphere and the circle in the matter of light

and shade, it would be impossible to distinguish one from the other by sight.

The pupils should be required to make several drawings of this example. The delicate gradations of light and shade required in order to express the true form of the surface will give that careful training of eye and hand which the pupil needs. It should be understood at the outset that the subject is a difficult one, and that too much care cannot be bestowed upon it.

In this drawing, the light is supposed to come in on the right, to be quite high, and a little in front of the sphere. These facts are expressed by the arrangement of the light and shade on the surface, and by the form and direction of the shadow.

It will be noticed, that the circle which forms the outline of the sphere is a shade lighter than that part of the surface near it. This delicacy of outline is always found in the sphere, and in all similar forms. Make this line sharp and decided, and the drawing will represent a hemisphere instead of a sphere. Particular attention, therefore, should be given to the drawing of this line. If by any chance it is made too dark, it should be weakened with the rubber, before shading is commenced.

In shading the sphere, begin by making a series of lines parallel to the outline, and extending a little way from it, but not so far as the shade is to go when the drawing is completed. These lines need not be continuous, like the outline. Those nearest the outline, in this case, may be about one-half inch long, and the others shorter, in pro-

portion to their distance from it, as shown in Fig. 1. The lines should diminish in strength as they approach the

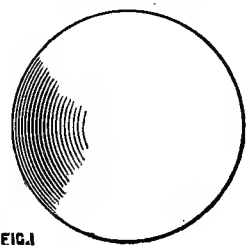


FIG.1

highest light, and should be somewhat lighter than the shade is required to be when complete; for there are other lines to be drawn over these, which will add to the strength of the shade. The edges of these lines, and the edges of all lines that may be used in producing the shade, should be faint, and their extremities indistinct. Having gone over all that part of the drawing where the heaviest shade is to be, in the manner just described, make another series of lines similar to the first, and crossing them at a very acute angle, as shown in Fig. 2. This series of lines should be made to approach nearer the point receiving the highest light than those first made. Having gone over the drawing again in this way, make another series of lines similar to those already drawn, and making a very slight angle with them. These lines should be brought a trifle nearer than the others to the highest light. Just how many times it may be necessary to repeat this operation, it will be impossible to say. This will depend upon the strength of the

lines used, and must be left to the judgment of the pupil. After the body of the shade has been made as suggested, it will be necessary to go over many parts of the drawing, adding a little here and a little there, as may be required, to grade the shade perfectly. It will be understood, of course, that all lines used must be curved.

As the shade approaches the point where the highest light is placed, the utmost care must be taken to make the lines light and hazy in all their parts; and the nearer the lines come to this point, the shorter they must be. In

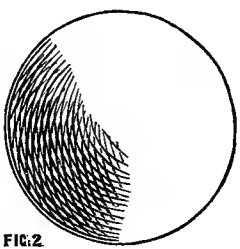


FIG. 2.

shading this part of the drawing, so arrange the lines as to avoid making a circle by the termination of the shade. This should melt away into the light so gradually that one can scarcely tell where the shade ends and the pure light begins. How this may be done to the best advantage may be learned by a careful examination of the example.

The reflected light, on the side in shade, must be carefully preserved. The truth expressed in this part of the drawing is an important one, and attention should always be given to it in shading curved surfaces. The lines forming the shadow should be horizontal.

Before attempting to add shade to their outlines, the pupils should be cautioned against bringing the shade too near the high light. It is better that they should leave too *much* of the surface light, than too little, as this is a fault that can be easily corrected in adding the last touches to the drawing.

Ex. 2. The kettle represented in this example has been selected to follow the sphere, that the pupil may have further practice in shading spherical forms, and, at the same time, continue the exercise of drawing the perspective appearance of the circle viewed obliquely.

This example will show that what the pupil has learned in shading the sphere is of general application; that, in learning to shade this form correctly, he has learned how to shade any object of similar form. It will also show, that, in shading objects of this form, the lines used in making the shade are not always to be arranged just as they were in shading the sphere. It is often the case, that there are projections on the surface, as in this subject. Here the little rings on the surface make it inconvenient to adopt the arrangement made in shading the sphere; and for this reason the lines have been drawn, in most cases, parallel to the rings, or nearly so.

In drawing an object of this kind, begin with the rim. drawing first the guide-line, as in previous examples; then, guided by the rim, draw the line at the lower part of the neck; next draw the body of the kettle. To assist in getting the opposite sides alike, drop vertical lines from the extremities of the guide-lines used in drawing the rim,

These lines may be of indefinite length: all that is required is to have them long enough to pass below the points where the outline of the kettle will cut them. In adding the detail, it is a matter of no special importance as to which part is taken first.

Before shading, examine the shadow on the inner surface of the kettle. The shape given to this shadow has more to do in expressing the exact form of the inner surface than any other thing about the drawing.

The break in the outline of this shadow, just below the rim, shows that the surface bulges out at this point; and the curve in the lower part of the line shows the curvature of that part of the surface over which this part of the shadow passes. Notice that the darkest part of this shadow is at the point nearest the highest light. The sun being on the right, the highest light on the inner surface is on the left side of the kettle. Observe that that part of this shadow directly opposite the highest light is not quite as dark as in other parts. This is owing to the fact that this part of the shadow receives more reflected light than the other parts.

In shading the outer surface, especial care should be taken with that part near the outline on the side in shade, and along the bottom of the kettle. The apparent roundness of the form is due to the appearance of reflected light seen in this part of the drawing.

Before shading, the shadows should be outlined. The lines used for this purpose should be very light.

LESSON VII.

In drawing the vase which forms the subject of this lesson, or any similar subject, first make a horizontal line to assist in drawing the circle formed by the opening at the top, and then, from the middle point in this line, drop a vertical line of indefinite length, to serve as a guide in drawing the body and foot of the vase. In making the drawing, no attention should be paid to the detail until a satisfactory outline of the main parts has been secured.

The two circles forming the main lines in the upper part of the vase should be drawn first, and then the main lines in the body and foot. In outlining any particular part, draw the half on the left of the guide-lines, before drawing that on the right.

As we have so often and so fully described the method of producing shades like those found in this example, it seems unnecessary to refer to this matter again.

Before shading, the exact outline of all the shadows should be drawn; and this should be done with great exactness, as the form of each shadow has very much to do in expressing the form of that part of the surface on which it falls. The reflected light on all the parts in shade should receive especial attention. It is the thought and care bestowed upon these matters that constitute the principal difference between that which is good and that which is bad in the way of shade and shadow.

LESSON VIII.

With this lesson we introduce a class of subjects of a more picturesque character than those which have preceded them. As the pupil has been confined exclusively to the drawing of simple objects of small magnitude, some of these subjects may appear to him quite formidable; but, if he has thoroughly mastered the preceding lessons, there is nothing in these examples, except the parts representing foliage, that he need fear. There is not a principle involved in any one of them, save in the parts just noticed, that has not been illustrated over and over again in the examples already given. We have selected these subjects, thinking that the few hints that we give in connection with them may be of service to the pupil in out-of-door sketching.

The teacher will do his pupils a service by encouraging them to practise drawing from nature, and from such subjects as will make pleasing pictures, as they have time and opportunity. It is not to be expected that all will have the patience and perseverance that is needed to secure any great degree of success; but there are always a few in every class who will make the effort, and persist in it until a good degree of success is secured, if they meet with that encouragement which the teacher can give them.

There are a few hindrances in the way of beginners which the teacher can remove.

It is a common notion with them that there are no good subjects to draw from within their reach. This is a mistake. There is not a city or town in all the land that will not fur-

nish subjects enough to keep one at work for a life-time. Any thing will answer. It is true that there is a choice in subjects; but it is equally true that the most commonplace thing will make a pleasing picture if it is carefully drawn and skilfully treated.

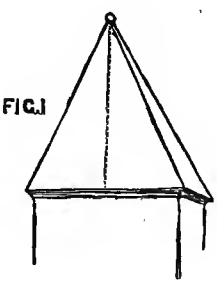
Pupils should be cautioned against attempting too much at the outset. Many a beginner has thrown aside his pencil in disgust, because he failed in doing that which would have required the knowledge and skill of an artist to have done well. The beginner should commence with the most simple subject he can find, and from this he should go gradually to those more difficult.

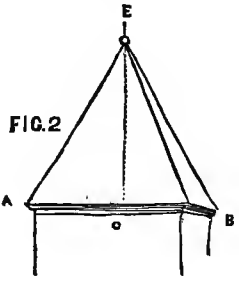
Another impediment in the way of the beginner is the mistaken idea that he can improve his drawing by making it to differ here and there from the object from which he is drawing. This course is sure to produce bad results. The success of the pupil depends upon his adhering strictly to the subject he is drawing from. By adopting this plan, he will in the end acquire that knowledge which alone will enable him to improve by alteration.

The tower selected as the subject of this lesson has been chosen for the purpose of calling attention to an error not unfrequently made in drawing objects of this form. The error to which we refer consists in misplacing the point which represents the apex of the pyramid formed by the roof. This point is sometimes placed vertically over the middle point of one side of the base, as shown in Fig. 1, instead of over the centre of the base, as shown in Fig. 2.

In drawing a subject of this kind, the main outline of the shaft, that is, the part below the roof, should be drawn first. Having done this, place a point corresponding to C, in Fig. 2, to represent the middle point in an imaginary line drawn from A to B. A line drawn from A to B would be a diagonal of the figure formed by the base of the roof; and the upper point in the roof would be over the middle point of this line. The point B being farther in the distance than A, the line would recede from the observer; and hence C, to represent the middle point, must be placed a trifle nearer B than A. Having placed C as directed, erect a vertical line, as CE, on this point, of sufficient length to represent the height of the roof; connect the upper point in this line with the vertices of the angles of the base with suitable lines, and the roof is correctly drawn.

The cross surmounting the roof should be drawn next.





As an aid in making the drawing of the cross upright, extend the line corresponding to CE, and use it as a guide-line. Draw the cornice next. Do not attempt to get a

perfect outline of any one of the brackets until the place that each one is to occupy in the drawing has been indicated. The main outline of the windows should now be lightly sketched in, and then the larger masses of the vine may be outlined. In making the drawing so far, only the faintest lines should be used. Now is the time to examine what has been done, and make corrections, if any are necessary. In completing the outline, begin at the top of the drawing, and work downwards. Do nothing more to the foliage than what has already been done, until all other parts have been shaded. Not a line of shade should be made until the outline of every part is perfect. In shading, work so as to keep the hand off what has been done. To do this, it will be necessary to work from the top downward.

In representing a roof, it is impossible to outline each shingle; and, if this were not the case, it would be useless to do it, for this degree of exactness would not add to the value of the drawing. Show that the roof is covered with shingles, that it is in repair, or out of repair, as the case may be, and you leave nothing further to be desired. On looking at any roof, it will be seen that the lines formed by the buts of the shingles are far more prominent than those formed by the joints; and, in case the roof is at some little distance from you, the lines formed by the buts are the only lines visible. In representing a roof, then, these lines should be the prominent ones in this part of the drawing. It will be observed that we have followed this rule in our example. To give the appearance of sunlight on the

tower, let the lines which represent the clapboards be clear and sharp. A soft, woolly line will fail to do this.

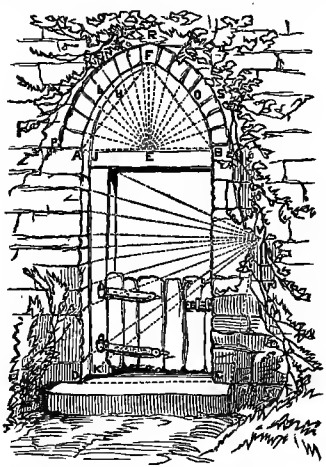
In drawing foliage, no attempt should be made to make a literal copy of it. It cannot be done. Do enough to suggest the truth, and let the imagination complete the picture. If a vine, or tree in leaf, be examined, it will be noticed that the leaves so overlap, and break the outline of each other, that their exact form cannot be traced. This is true even upon the closest inspection; but when the view is taken from some little distance, as in this example, the outline of the leaf is entirely lost; all that can be distinguished is the shape of the masses.

Foliage is one of the most difficult of all things to represent; for the reason that it is absolutely impossible to make a literal drawing of it. No amount of skill or patience can do this, and it is for this reason that the skill acquired in the practice of drawing from other objects is of so little avail in drawing foliage. But it may be thought, perhaps, that the same difficulty does not lie in the way, in drawing from examples, that is met with in drawing from the thing itself. It is true that there is not that multitude of detail in the drawing of a tree or vine, that exists in the object itself; but, if the drawing is good, there is in it that same tangled mass of lines which renders it impossible to copy it literally, that we find in the thing represented. A drawing that can be copied does not represent foliage. All that can be done is to *imitate* it, to make similar forms in a similar way.

LESSON IX.

In drawing the doorway which forms the subject of this lesson, proceed as follows: —

Consider the width of the doorway as compared with its height up to the top of the crossbeam, and draw a figure, as ABCD in the accompanying cut, which shall represent those proportions. Consider next the height of the arch, — that is, the distance from the top of the crossbeam to F, the



under-side of the keystone, using the width of the doorway as a measure; and, having determined this, find the middle of AB, and on this point erect a vertical line, as FE, to represent the height of the arch. Next, draw the guide-lines FA and FB, and then, guided by these lines, draw the curved lines FLA and FOB. Consider, next, how far the

line corresponding to HJK appears to be on the right of the edge FAD, and draw this line. Draw the beam over the doorway, and the doorpost, next; then the wicket-gate, and then the outer line in the arch, — the line corresponding to PRS. The doorstep may be drawn next; then the niche in the wall on the right of the doorway; and, after this, outline the most prominent masses of the vine, and sketch in some of the largest branches. So far, no attention whatever should be paid to the detail of any of the parts outlined. What has been done is to be used simply as a guide to a more perfect drawing. Every line that has been made should be so faint that the least touch of the rubber will remove it. The work now done should be carefully compared with the original, and, if any errors are discovered, now is the time to correct them. In completing the work, commence by outlining the stones, beginning with those about the doorway. In doing this work, it would be a useless waste of time to carefully copy the exact form of every stone. All that is required is that the forms be similar to those in the original. The lines used about the doorway should be sharp and clear, so as to attract attention to this part of the picture, it being the principal point of interest in the subject; while those at the upper part of the picture, and those on the extreme right and left, should be less decided. This will keep the eye fixed on the point desired. The crevices between the stones are not all of the same size, — some are broader and deeper than others. This difference is expressed by making the separating lines vary in breadth and strength. The stones in the arch should be

carefully drawn. We do not mean by this that they should be literally copied: they may be unlike the original in size; but the lines on the outer face, representing the interstices between them, must tend towards E, the middle point in the line AB. Then, again, those lines in the receding face of the arch, together with those in the wall below, being parallel to each other, must in the drawing converge as they recede, and tend to one point; and, being horizontal, those above the eye must incline downward, and those below the eye upward. That point in the drawing to which these lines tend corresponds to a point in the object that was directly opposite to the eye of the observer. This point is called the *centre of view.* It is so named because it is really the centre of the view seen by the observer.

When the work referred to has been completed, the woodwork should be commenced. The outline first drawn should be strengthened here and there, as may be necessary to give it character, and the detail of all the parts should be added. In doing this, notice the inequality in the width of the boards over the doorway, and also of those in the gate, and mark the prominence of the grain of the wood. Notice the cracks between the boards. In some cases they are scarcely visible, and in others they are wide, uneven, and irregular. Then, again, observe how uneven and irregular the upper and lower edges of the boards are in the gate, how the gate sags, and that the hinges are loose. These matters may appear to be mere trifles, of no special importance: but this is not the case; they are important. They mark the difference between that which is new and that

which has seen service; they give character to the parts referred to. The power to draw well depends on the power to observe facts like these. There must be keenness of observation to produce a truthful and pleasing picture. Genius can do nothing without it.

Having completed the outline of the woodwork, the shading of the wall may be commenced. Begin with the part on the left of the doorway. In making the shade, vary the strength of the tint on the stones. All stones — and even all parts of the same stone — are not exactly of the same shade: some are darker than others. By varying the strength of the tint here and there, we get variety, which is a pleasing element. The shading of the parts near the vine, and the drawing of the vine, should be carried on together. In representing the vine, the form of the leaf should be shown the most clearly along the edges of the masses, and where the leaves are separated from each other, for here is where they are seen the most clearly in nature. The leaves being angular, the lines used to represent them, in those parts where their exact form is not attempted, should have the character of the leaf, so as to suggest their form. In the example, it will be seen that the lines used in representing the masses, where the form of the leaf is not drawn, are full of angles similar to those found in the leaves. Care should be taken in making the shadow cast by the vine. The appearance of projection given to certain parts of the vine depends upon this shadow. The outline of the shade, seen through the open doorway, should be clear and decided, and the shade should be even. The ap-

pearance of space, as though one could enter the doorway, is due to the clearly-defined edges of this shade, and to the entire absence of all appearance of lines in it.

In representing grass, even more than in drawing foliage, we are obliged to adopt some means other than that of making a literal drawing of it. Where it is short, as in the broken patches seen in the path leading to the doorway, it may be represented by a series of parallel lines. The lines used should have the direction of the surface. If broken into patches, as in this case, dark touches may be made here and there along the outline, as seen in the example. These sharp touches help to convey the idea to be expressed,

FIG. 2.

and they also show that the surface of the sod stands a trifle above the level of the ground about it. Where the grass is long, as was the case on the right and left of the path, it may be represented by lines similar to those given in Fig. 2. The angles in these lines should be *very acute*, and the parts forming the angles should vary in direction, some inclining one way and some another, as blades of grass

FIG. 3.

incline. By separating the parts of the line, so as to form a connected series of angles, the light spaces left between

the parts express the idea of blades, even better than the lines which form the angles. If, in making these lines, the parts terminate bluntly, as in Fig. 3, they should be made to taper by going over the work again, carefully pointing each line, as in Fig. 2.

LESSON X.

In drawing from an object composed of many parts, or from a subject embracing many objects, the beginner, unless instructed, is at a loss as to what he may properly include in his drawing, and what he ought to omit. And then, again, there are very few who start with a definite idea of the manner in which they will treat what they undertake to represent. The example connected with this lesson affords us the opportunity of giving some instruction on these points that may be of service to the pupil.

In drawing from nature, or from a subject of the kind represented in the example, it is seldom desirable to include in the picture all that comes within the range of vision. As a rule we may say, draw that object or group of objects which attracted attention to the subject, and which forms its most pleasing feature, and just enough of whatever may surround it to give it support, and no more.

It will be observed that we adopted this rule in drawing the subject connected with this lesson. More of the apartment was seen than we have represented. The chimney-piece was the attractive feature; but much of that which lay on the right and on the left of it was of no service

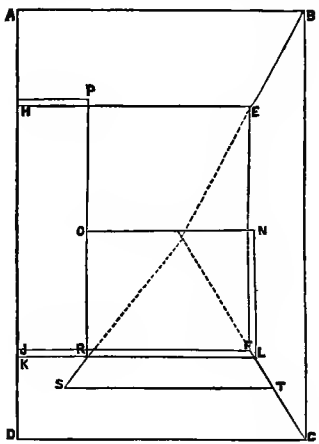
in supporting this part, and for this reason it was omitted. When a picture covers a great deal of ground, including many things, unless very skilfully treated, the eye does not rest with satisfaction on any part of it.

To make a pleasing picture, even when the objects represented are few in number, requires the exercise of some knowledge and skill, aside from that which is needed in order to make an accurate drawing. There should be in every picture some one part to which the eye is attracted more strongly than to any other. This result may be secured by showing more detail in the part to which it is desired to turn attention than is shown in any other part of the drawing, and by making the light and shade in this part the most emphatic of any in the picture. Our example affords an illustration of this method of treating a subject. The chimney-piece is the first thing to catch the eye. All other parts of the subject are made subordinate to this by omitting their detail, and by making the light and shade on them less intense than on the chimney-piece and the parts immediately connected with it.

In drawing a subject of the kind represented in the example, begin by making a figure similar to ABCD in the accompanying cut. This figure should be of just the right length and width to include the outline of so much of the apartment as it is proposed to represent, and no more. The main outline of the room should be drawn next; and, after this has been done, the space and the place occupied by prominent parts, such as the chimney-piece and the post on the left, should be indicated. All of this should be done,

as shown in the cut, without the slightest regard to detail; and the lines should be drawn as light as it is possible to make them.

Having proceeded with the work so far correctly, it will be an easy matter, having these lines as a guide, to make a correct outline of all the parts. In this subject, the base of the candlestick was on a level with and directly opposite the eye. Observe that the lines in the outline of the room, corresponding to CF and BE in the figure, tend



towards this point; and, further, that all lines parallel to these — such as the seams in the floor, those in the wall on the right, those overhead, the upper and the lower side of the closet door, and the receding lines in the fire-place — tend to the same point.

The shading of this subject is so simple that little need

be said on this point. We would, however, call attention to the drawing of some of the shadows. Observe that cast by the closet-door. It will be noticed that this shadow is not so wide on the chimney-piece as it is on the wall above it. It is this difference of width, in the different parts of the shadow, that causes the wall to appear to set back from the chimney-piece. In the drawing of the shadow cast by the post, on the left of the chimney-piece, the same facts are to be noticed. Where the plaster is off, the shadow is broader than on those parts covered by it. It is this, and this alone, that shows the thickness of the plaster on the parts covered by the shadow. The thickness of the other parts is shown by the breadth of the shadow cast by the plaster on the brick-work. Notice the shadow on the wall, at the right of the chimney-piece, and observe the sharpness of its outline, and the intensity of the shadow. This is owing to the nearness of the chimney-piece to the wall. The nearer the object casting the shadow to the surface receiving it, the darker the shadow and the sharper the outline. Observe, also, the outline of this shadow on the side next to the wall. Where the joints come between the boards, this line curves so as to make the shadow broader here than anywhere else. This shows that the outer edges of the boards have been worn away in this corner, so as to leave quite a seam between them. The same fact is shown by the irregular outline of the shadow cast by the handle of the broom.

The teacher cannot take too much pains in calling the attention of his pupils to all of the facts connected with shadows, as he may find them illustrated in these examples,

or as they may be found in connection with objects about the room. Shadows are invaluable in expressing form and space. We can scarcely find an object, composed of many parts, that can be fully described without the aid of well-drawn shadows.

LESSON XI.

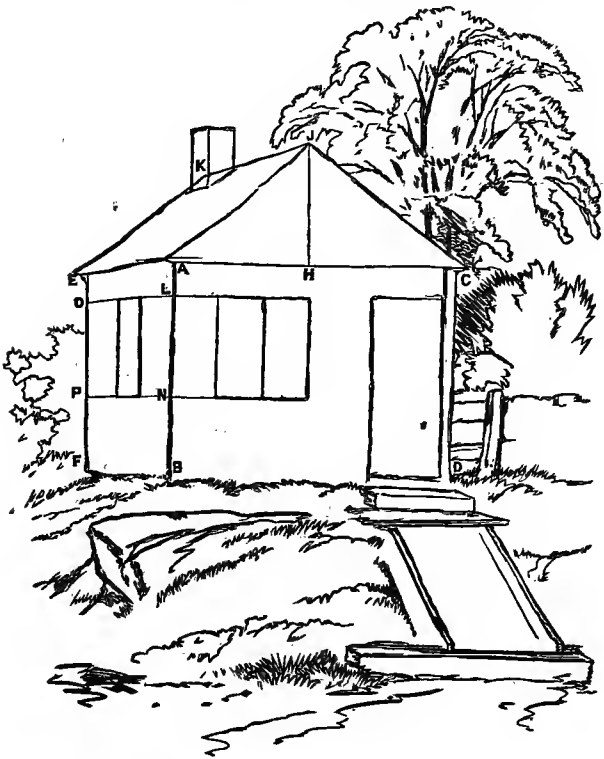
The example selected for this lesson is of the same kind as that given in our last. In drawing it, proceed as suggested by the instruction then given. Many of the minor parts the pupil is already familiar with, as he has drawn them in the earlier lessons of this series.

LESSON XII.

In drawing from nature, the selection of a proper point from which to take the view is a matter of great importance. Having selected a subject, it should be examined from various points before deciding upon the one from which the drawing shall be made. If the example connected with this lesson be examined, it will be seen that the point from which the drawing was made was not taken without some thought. It will be observed that the illuminated side of the building is entirely surrounded by parts in shade. By selecting a point which secured this, we were able to give a better idea of space than could have been done without it. Take, for example, the corner of the house, on the right, and the foliage near it. The foliage being darker than this part

of the building, it appears, by contrast, farther off. There is, apparently, a space between the corner of the house and the shrubbery. Another advantage gained in surrounding this part of the building with something darker than itself is, that we are able to make the white paper represent a more intense light than it would under other circumstances. From our point of view, we not only found a good arrangement of light and shade, but we found them in about the right proportions to make a pleasing and effective picture. Had we chosen a point on our right, so that we could have seen the front and right sides of the building, we should have had the light shining on both of them; and in this case it would have been a very difficult matter to have kept the drawing from looking flat. There is nothing of so much assistance in expressing solidity as the contrast produced by light and shade. Then, again, the picture would have been tame and spiritless. Effect is the result of contrast. Again, the composition would not have been as good as it is now. The steps leading to the door, for example, would have come near the middle of the drawing, leaving the spaces on either side of them about equal. This would have looked set and formal. Neither should we have had the easy flowing lines of the tree and shrubbery in close connection with the straight and rigid lines in the outline of the building, relieving them of their hardness; for there would have been quite an open space between the tree and the building; and the bush on the left, just beyond the house, would have been hidden from sight altogether. It is not unfrequently the case that a very slight change in

the position of the observer will materially improve the subject. Had we taken a position only a few steps to the right of the one chosen, the outline of the tree would have met



the outline of the roof exactly at the peak of the gable. This would have been a sad defect in the composition, as any one can see.

Having selected a point from which to make the draw-

ing, and having decided as to how much of the view we would include in the picture, the drawing was commenced by making a vertical line, as AB, to represent the nearest corner of the house. The width of the end wall, as compared with the height of the post AB, was then determined; and the line to CD was drawn, at the proper distance from AB. This wall was seen somewhat obliquely, but not sufficiently so to make any apparent change in the direction of the lines represented by AC and BD. These lines were drawn next. The height of the gable, as compared with the height of the wall, was then determined. The peak J being vertically over the centre of the wall, a point, as H, was placed in the middle of AC, and the vertical line HJ was drawn.

The lines JC and JA were drawn next. Then we determined how far the corner EF seemed to be on the left of AB. In doing this the width of the wall already drawn was taken as a measure. The line EF was then drawn, of indefinite length. The apparent direction of the line BF was next considered. This line being a trifle below the level of the eye, appeared to incline upward as it receded. Its exact inclination was determined by comparing it with the pencil held in a horizontal position, and so as to present a front view between the eye and the line. Having drawn BF, the line AE was next drawn. This line being above the eye, appeared to incline downward as it receded. In ascertaining its apparent inclination, the pencil was used as in determining the inclination of BF. Next, the line JK, which represents the ridge-pole, was made. This line, being

parallel to the lines represented by AE and BF, was drawn so that, in our judgment, it would tend towards the same point as these. The side of the roof, KE, was then represented. The point K, in this line, was a trifle farther in the distance than the end, E; but, as in the case of JA, the difference was too small to make any perceptible change in its direction; and, therefore, it was drawn in its actual position. In drawing this line, JA was taken as a guide. The main outlines of the chimney, door, and windows, were next drawn. In representing those lines lying parallel to the ridge-pole, eaves, and the sill on the left side of the house, the lines JK, AE, and BF, were taken as guides. Having completed the main outline of the house, the remaining parts of the subject were taken up in the following order: the ground about the building, the steps, the wall and fence on the right, the tree and shrubbery. The amount of finish given to the drawing up to this point is shown in the cut. It should be understood that the lines in the cut do not represent the strength of those in our drawing. In the drawing, all lines were light and delicate. Having satisfied ourselves of the correctness of this outline, we then drew the detail of the several parts of the building, — the door, windows, corner-boards, clapboards, &c. The lines representing the clapboards on the shaded side, however, were not added until after shading, as they would have been obliterated in making the shade.

In outlining the tree, although we made no special effort to be exact, we were very careful to preserve its general

form; for it is by this that the different kinds of trees are distinguished from one another. We tell the elm from the ash, the willow from the oak, not by their leaf, but by their form, by the shape and sway of their larger masses of foliage, and the shape and direction of their branches. These are the points to be noticed in drawing a tree. The kind of line used in shading the tree can best be learned from the drawing.

Those who desire further instruction in out-of-door drawing will find the subject treated at length in Nos. 5, 6, and 7 of this series of books.